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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/554,041	10/12/2000	Martin Lenfers	10191/1376	5483

26646 7590 10/16/2002

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EXAMINER
OLSEN, KAJ K

ART UNIT	PAPER NUMBER
1744	12

DATE MAILED: 10/16/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action	Application No.	Applicant(s)	
	09/554,041	LENFERS ET AL.	
	Examiner	Art Unit	
	Kaj Olsen	1744	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 24 September 2002 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.

b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.

2. ☐ The proposed amendment(s) will not be entered because:

   (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);

   (b) ☐ they raise the issue of new matter (see Note below);

   (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or

   (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

   NOTE: _____.

3. ☐ Applicant's reply has overcome the following rejection(s): _____.

4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).

5. ☒ The a)☐ affidavit, b)☐ exhibit, or c)☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: *see attached discussion*.

6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.

7. ☒ For purposes of Appeal, the proposed amendment(s) a)☐ will not be entered or b)☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

   The status of the claim(s) is (or will be) as follows:

   Claim(s) allowed: _____.

   Claim(s) objected to: _____.

   Claim(s) rejected: *6-12*.

   Claim(s) withdrawn from consideration: _____.

8. ☐ The proposed drawing correction filed on _____ is a)☐ approved or b)☐ disapproved by the Examiner.

9. ☐ Note the attached Information Disclosure Statement(s)(PTO-1449) Paper No(s). _____.

10. ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed on 9-24-2002 have been fully considered but they are not persuasive. Many of the arguments provided by the applicant are verbatim of arguments made previously and the examiner will not reiterate his responses to those arguments here (see paper no. 10). The examiner will instead concentrate on arguments subsequent to the applicant's previous response (paper no. 9). Applicant urges that enablement does not require an exhaustive disclosure to teach a person reasonably skilled in the art to make or use the invention. The examiner would agree. However, the examiner's basis for the rejection under 112 first paragraph was not a nitpicking of the various aspects of the invention that were not explicitly set forth in the originally filed disclosure. Rather the examiner's 112 first paragraph rejection was based on the fact that one possessing ordinary skill in the art could not fundamentally determine what the invention is. In particular, the examiner cannot determine what the negative feedback is, where this feedback is located, and what would constitute "optimized" feedback. The applicant has agreed with the examiner's understanding of the term "negative feedback", but the applicant still cannot describe for the examiner what this feedback specifically has to do with the set forth structure and how one would "optimize" the structure to arrive at the claimed invention. On the paragraph bridging pp. 3 and 4 of the After Final response, applicant describes how prior art manufacturers would choose values of R1, R2, and R3 and the problems with those choices. That may be correct, but how does the applicant improve or even differ from the prior art? Does the applicant utilize a different principle for choosing R1, R2, and R3? If so, what is that principle? Applicant further urges that the applicant is not required to provide a detailed formula

for selecting the resistors. The examiner agrees, but the absence of a detailed formula is not the basis of the lack of enablement rejection. Rather the problem is that the disclosure does not provide *any* guidance of choosing the resistors to arrive at the claimed invention. Because the applicant appears to be admitting that the configuration of R1, R2, and R3 was known in the art (albeit not the actual values of R1, R2, and R3 or the manner of which they are chosen) (paragraph bridging pp. 3 and 4 of applicant's After Final response), the obvious question begged is how does the instant invention improve on what was done by the prior art. If the choices of R1, R2, and R3 are chosen to optimize negative feedback (even though the examiner cannot determine what or where this negative feedback is), enablement would require the applicant provide *some* guidance as to how these resistors are chosen. Applicant urges that the "optimum" selection of resistors can be determined with some trial and error. However, because it is unclear what the applicant construes as being an "optimum" selection (what is being "optimized"?), even this trial and error would constitute an undue experimentation burden. Moreover, even if the meaning of an optimized feedback were understood, the applicant still has not provided *any* guidance on how the trial and error of choosing the values for the three (and sometimes four) resistors would commence.

2. Even though the applicant's do not address the examiner's 112 first paragraph rejection of the "loaded voltage divider", this rejection also constitutes part of the examiner's rejection concerning lack of enablement, and this rejection is still outstanding in this application.

3. With respect the rejections under 112 second paragraph, the examiner will withdraw the 112 rejections concerning whether the "joint supply conductor resistor" is part of the loaded voltage divider in view of the applicant's amendment to claim 6. The examiner will also

withdrawn his objection to the term "directly" in claim 12, but will maintain the other outstanding rejections to the claims.

4. With respect to the use of the terms "optimized" and "maximized" for the level of negative feedback, applicant urges that the metes and bounds of these terms are clear, namely that the resistors are chosen such that the negative feedback is as "high as possible, without adversely affecting the pump cell" (final two lines of page 6 of applicant's arguments). First, the examiner points out that what is being *claimed* is not what the above passage recites. The claims merely state that the feedback is being "optimized" (claim 6) or "maximized" (claim 7) without any suggested what they are being optimized with respect to. The claims do not qualify the terms "optimized" and "maximized" with the proviso that the pump cell not be adversely affected. In fact, the literal meaning of a *maximized* negative feedback (absent any qualifying concept) would be infinite negative feedback. It would not appear to the examiner that the applicant wishes claim 7 to be interpreted as being drawn to infinite negative feedback, yet that is how it is currently being claimed. Second, even if the applicant were claiming what was stated in the arguments, what would constitute an *adverse* affect on the pump cell? In what sense is the affect adverse (inability to feedback control the pump cell, the speed at which feedback of the pump cell occurs, etc)? Of the various possible things that could be construed as being an effect on the pump cell, what then would one possessing ordinary skill in the art reasonably construe as being an *adverse* effect? In other words, what is the threshold where an affect becomes an adverse contribution? There is no guidance in the disclosure as to the answer to these questions.

5. Applicant also traverses the rejection to claim 10 and the use of the term "minimized". The applicant urges that the reduction of the cross section of the joint supply conductor section is

another way to increase negative feedback, and the use of the term is thereby definite. The examiner disagrees. First, similar to the above discussion concerning the term "maximized", applicant has not presented the term "minimized" with any sort of proviso concerning the metes and bounds of the term. Hence, a *minimized* cross section (absent any qualifying concept) would *literally* be a cross section of wire that would have resistance approaching extremely large resistances. The extremely large resistance would presumably dwarf the resistances R1, R2, and R3 and would tremendously hinder the current flow through the conductor. It doesn't appear that this is how the applicant wishes this term to be interpreted, but that is how the term would currently be read in the claim as provided. Second, the applicant appears to be urging that the term is definite because it occurs in the specification. However, there is no question that the term "minimized" is a relative term, and the scope of relative terms must be clearly set forth in the disclosure. It must be clear from the disclosure how the applicant's define the scope of any relative term because one possessing ordinary skill in the art cannot read the minds of the inventor. That requirement has not been satisfied for any of the terms "minimized", "optimized" or "maximized".

6. With respect to the rejection of claim 11, applicant urges that the claims cannot be read in a vacuum, but in light of the specification. However, the mere fact that the language utilized in a claim is described in the specification does not obviate the applicant's obligation in the claims to clearly and explicitly set forth the elements that comprise the invention and how these elements cooperate to define the invention. In particular, it is unclear if the structure that would apparently read on the terms "printed conductor section" and "contact point" would overlap elements already specified (e.g. the voltage divider circuit).

7. Applicant traverses the rejections of claim 12. With respect to the rejection concerning "downstream", applicant again urges that claims cannot be interpreted in a vacuum, but in light of the specification. Again, the mere fact that the language utilized in a claim is described in the specification does not obviate the applicant's obligation in the claims to clearly and explicitly set forth the elements that comprise the invention and how these elements cooperate to define the invention. In particular, applicant has not established any sense of direction *in the claims* such that the term "downstream" has any clear meaning.

8. With respect to the term "maximum", applicant has not qualified what is meant by "maximum" so the examiner believes this language is similarly indefinite as discussed above for claims 6, 7, and 10.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kaj Olsen whose telephone number is (703) 305-0506. The examiner can normally be reached on Monday through Thursday from 8:30 AM-6:00 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Mr. Robert Warden, can be reached at (703) 308-2920.

When filing a fax in Group 1700, please indicate in the header "Official" for papers that are to be entered into the file, and "Unofficial" for draft documents and other communications with the PTO that are not for entry into the file of this application. This will expedite processing of your papers. The fax number for non-after final communications is (703) 872-9310 and the fax number form after-final communications is (703) 872-9311.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist, whose telephone number is (703) 308-0661.

Kaj K. Olsen
Patent Examiner
AU 1744
October 15, 2002

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